

REMARKS

Claims 1-6 and 9 were pending in the above-identified application. Claims 1-6 and 9 were rejected. Claims 7-8 were previously withdrawn from consideration. With this Amendment, claims 1-4 are amended to more clearly recite the scope of Applicant's invention, claims 5-6 are cancelled, and new claims 10-19 are added. Accordingly, claims 1-4 and 9-19 are at issue.

Claims 1-6 and 9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Stockman in combination with Cohen. Applicant respectfully traverses this rejection. As amended, claim 1 recites "swapping determined pages...[,],...updating an OS to reflect the swapped pages...[and]...*logging indications of the swapped pages* so that an image of the OS visible data prior to the swapping can be reconstructed, *without requiring that each read operation and each write operation be written to a history log*" (emphasis added). Pages are often swapped when a medium such as a disk is reorganized, for example during defragmentation. As recited in claim 1, rather than writing each actual read and write operation to a history buffer, whenever a page swap is executed, an indication of that swap is logged. Thus, by simply referring to the logged indications, it is possible to reconstruct each earlier data state, prior to the execution of each subsequent step of the disk reorganization. This is very useful, because a history buffer only has so much storage space, and thus typically cannot record each data operation of a defragmentation operation. Although a defragmentation operation technically includes many data reads and writes, many of these operations comprise page swaps executed as data is moved between locations on the disk to form contiguous files. Thus, the inventive subject matter recited in claim 1 enables reconstruction of successive data states *without requiring that each read operation and each write operation be written to a history log*.

Neither Stockman nor Cohen, either alone or in combination, suggests or discloses enabling reconstruction of successive earlier data states without logging each read and write operation for subsequent reversal, as is recited by claims 1 of Applicant's pending application. Stockman discusses storing a single snapshot of a data state before a defragmentation operation is begun, and storing an image of a desired end state (Stockman, col. 14, line 49 - col. 15, line 11, Fig. 3A.) Thus, Stockman can return to a pre reorganization state, but cannot return to each, successive data state of the reorganization. Furthermore, nothing in Stockman suggests or discloses storing indications of page swaps. Stockman stores a full tile map, which is a complete image of a data state of a medium, indicating all tiles and vacancies. (Stockman, col. 14, lines 49 - 55.)

Cohen discusses multithreaded, preemptive multitasking file defragmentation, and is silent on the issues of page swapping and data state storage.

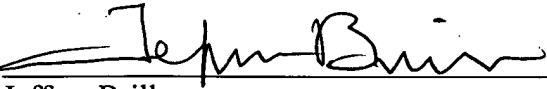
For the record, Applicant respectfully traverses the Examiners suggestion that motivation exists to combine Stockman and Cohen. However, as both references lack the recited claim limitations, Applicant believes this point to be moot.

Claims 2-4 and 9 depend on claim 1, and are therefore distinct over the art of record for at least the same reasons. These dependent claims also recite additional novel features, such as "incorporating desired close proximity information of various OS visible pages into an algorithm executed by an engine" and "diverting writes to a different position on the disk so historical data remains in its original location." Claims 10-14 are computer program product claims similar in scope to claims 1-4 and 9. Claims 15-19 are system claims similar in scope to claims 1-4 and 9. Thus, claims 10-19 should be allowable for at least the same reasons as claims 1-4 and 9.

In view of the above amendments and remarks, Applicant respectfully submits that all claims are clearly allowable over the cited prior art, and respectfully requests early and favorable notification to that effect.

Respectfully submitted,

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By: 
Jeffrey Brill
Registration No. 51,198
SONNENSCHN NATH & ROSENTHAL LLP
P.O. Box 061080
Wacker Drive Station, Sears Tower
Chicago, Illinois 60606-1080
(415) 882-2479

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